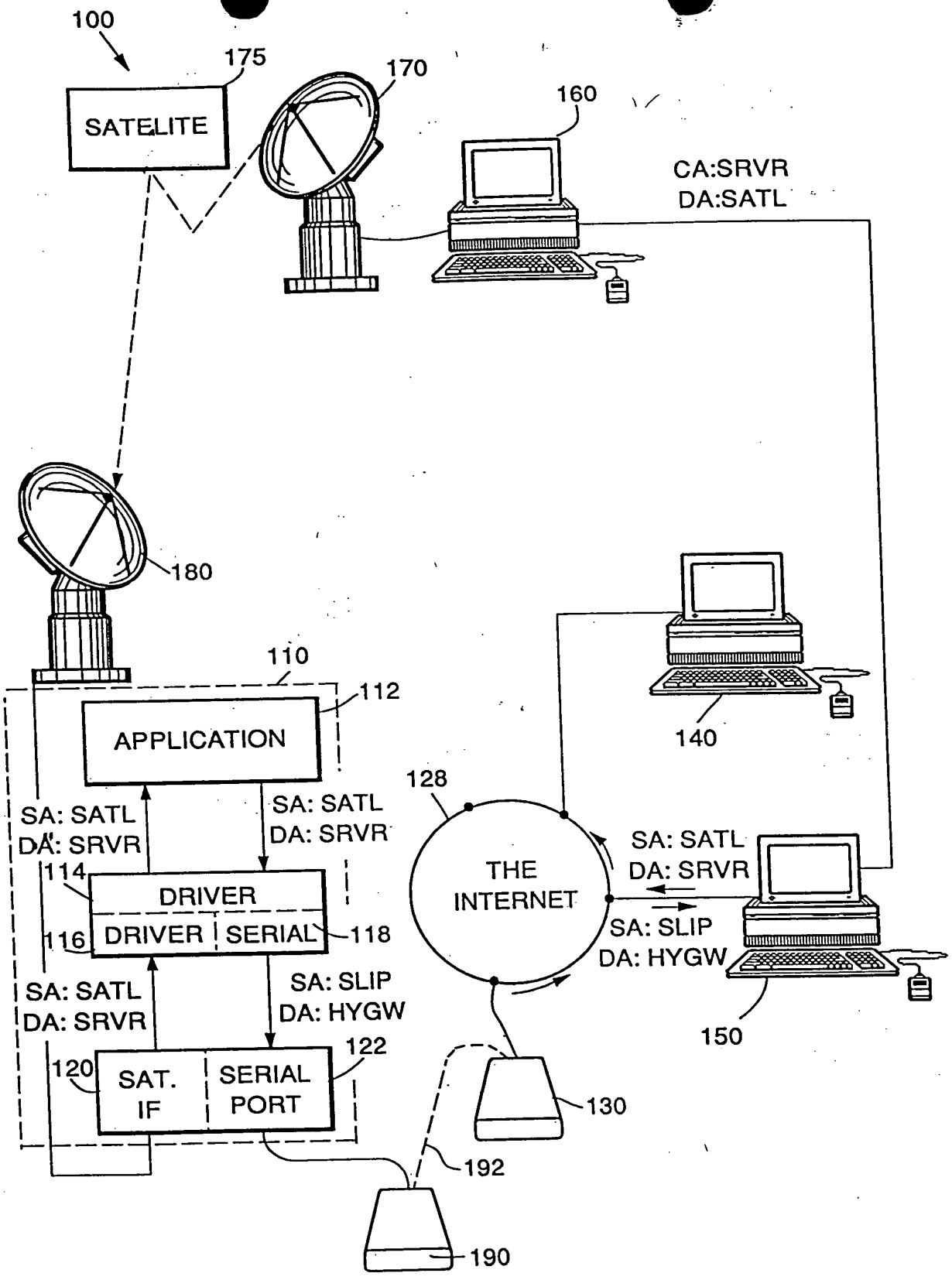
100
175
SATELITE
170
160
CA:SRVR
DA:SATL
180
110
112
APPLICATION
SA: SATL
DA: SRVR
SA: SATL
DA: SRVR
114
DRIVER
116
DRIVER
SERIAL
118
SA: SATL
DA: SRVR
SA: SLIP
DA: HYGW
120
SAT.
IF
SERIAL
PORT
122
128
THE
INTERNET
SA: SATL
DA: SRVR
SA: SLIP
DA: HYGW
140
150
130
192
190

FIG. 1.

FIG. 2.

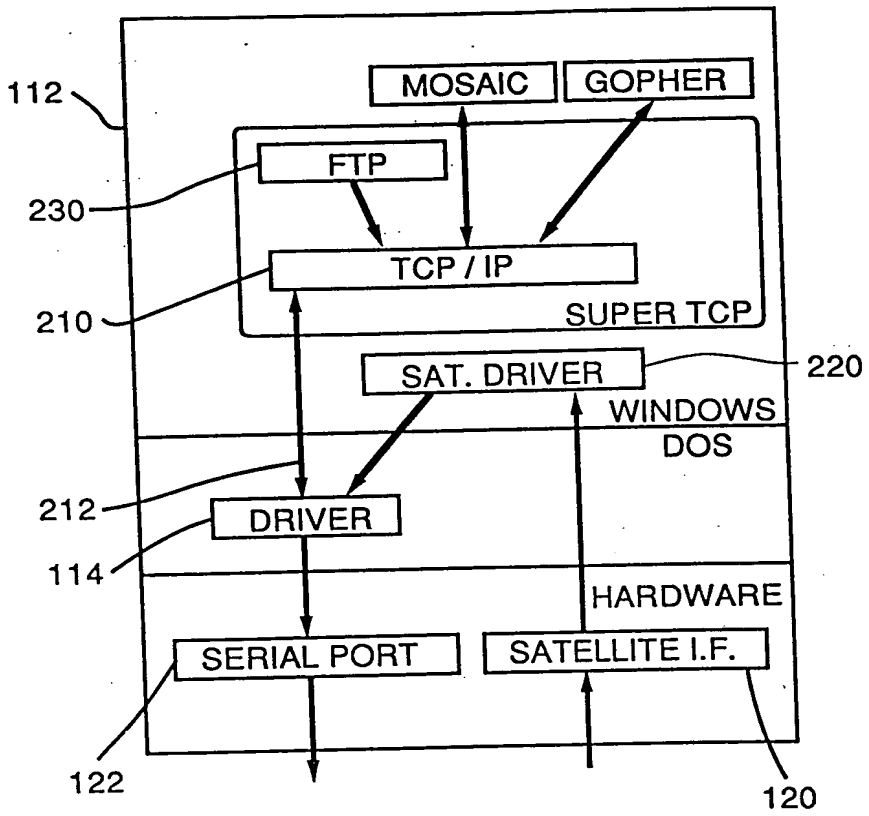

FIG. 3.

310

NORMAL IP PACKET

VERS	HLEN	SERVICE TYPE	TOTAL PACKET LENGTH	
IDENTIFICATION NUMBER			FLAGS	FRAGMENT OFFSET
TIME TO LIVE		PROTOCOL	HEADER CHECKSUM	
SOURCE IP ADDRESS				
DESTINATION IP ADDRESS				
IP OPTIONS (IF ANY)				PADDING
DATA				

BIT 0 BIT 32

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FIG. 4.

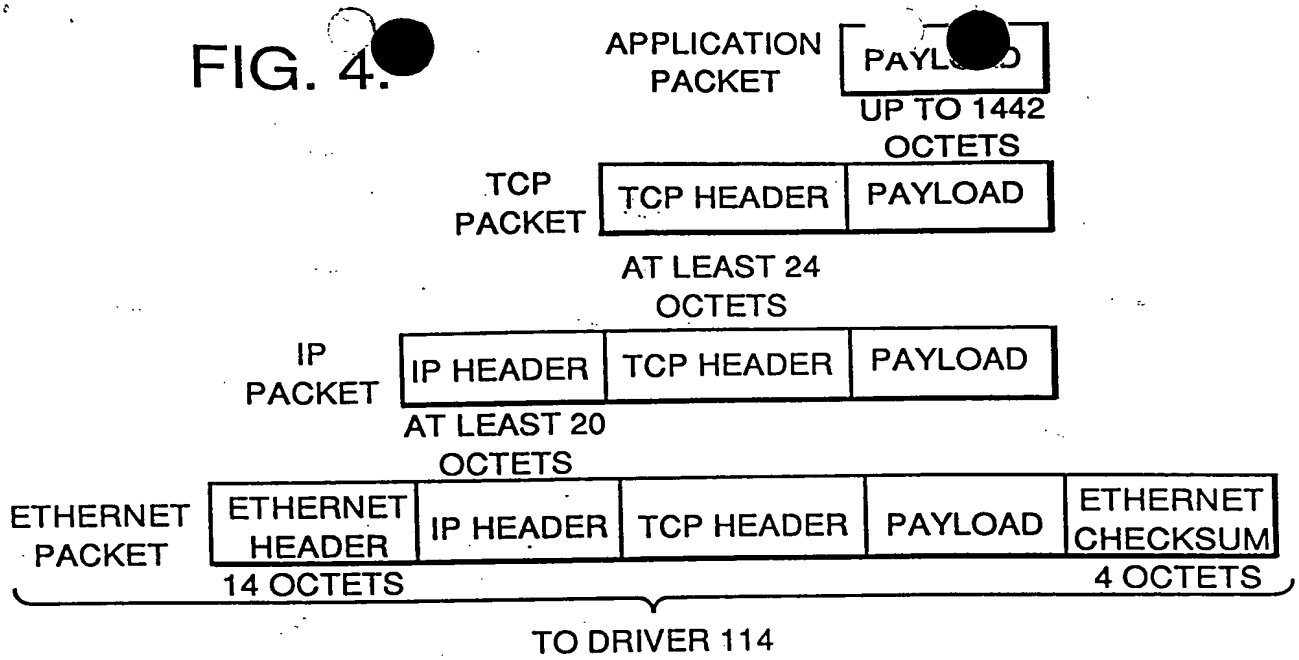
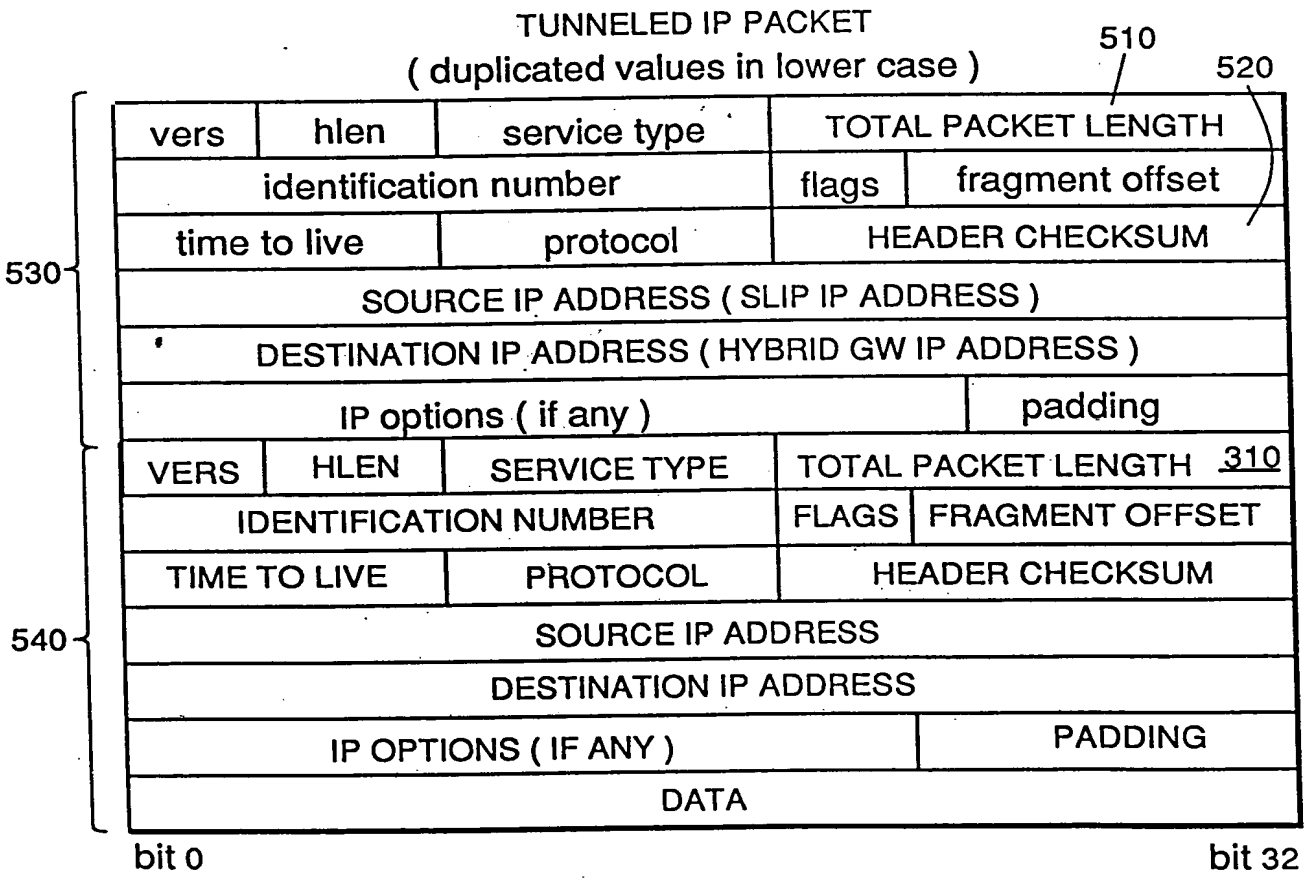


FIG. 5.



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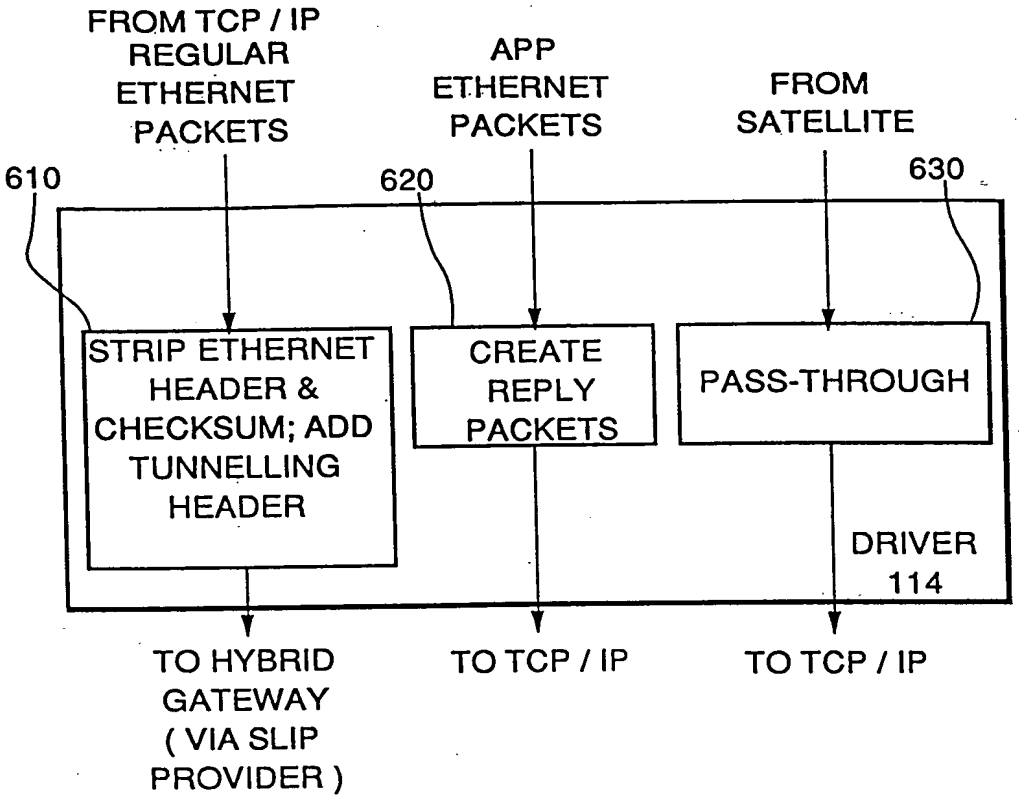

FROM TCP / IP REGULAR ETHERNET PACKETS
APP ETHERNET PACKETS
FROM SATELLITE
610
620
630
STRIP ETHERNET HEADER & CHECKSUM; ADD TUNNELLING HEADER
CREATE REPLY PACKETS
PASS-THROUGH
DRIVER 114
TO HYBRID GATEWAY (VIA SLIP PROVIDER)
TO TCP / IP
TO TCP / IP

FIG. 6.

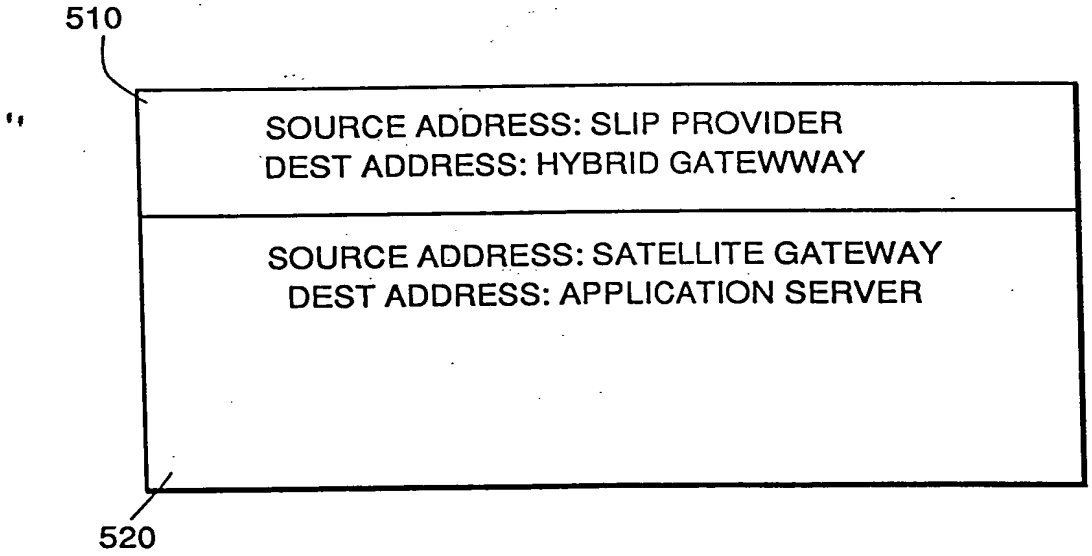

510
SOURCE ADDRESS: SLIP PROVIDER
DEST ADDRESS: HYBRID GATEWWAY
SOURCE ADDRESS: SATELLITE GATEWAY
DEST ADDRESS: APPLICATION SERVER
520

FIG. 7.

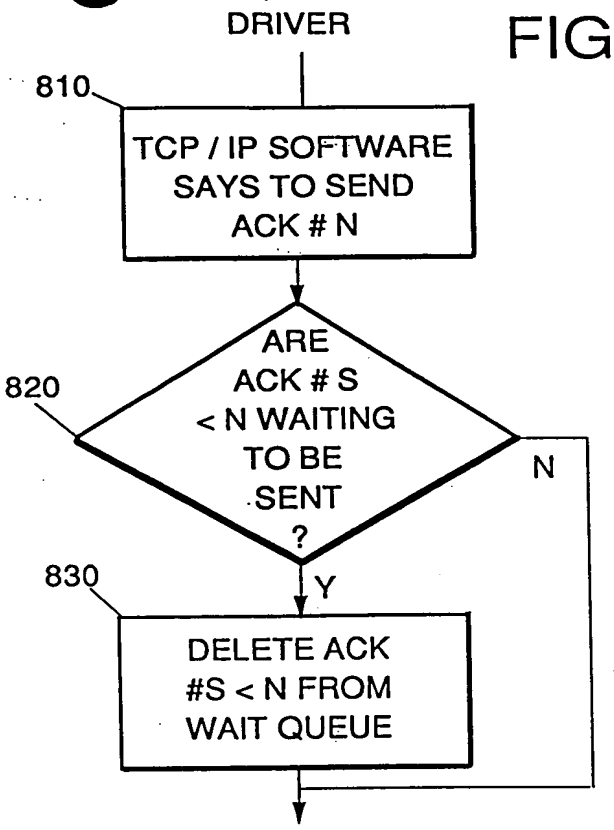

DRIVER
810
TCP / IP SOFTWARE SAYS TO SEND ACK # N
820
ARE ACK # S < N WAITING TO BE SENT ?
N
Y
830
DELETE ACK #S < N FROM WAIT QUEUE

FIG. 8.

FIG. 9.

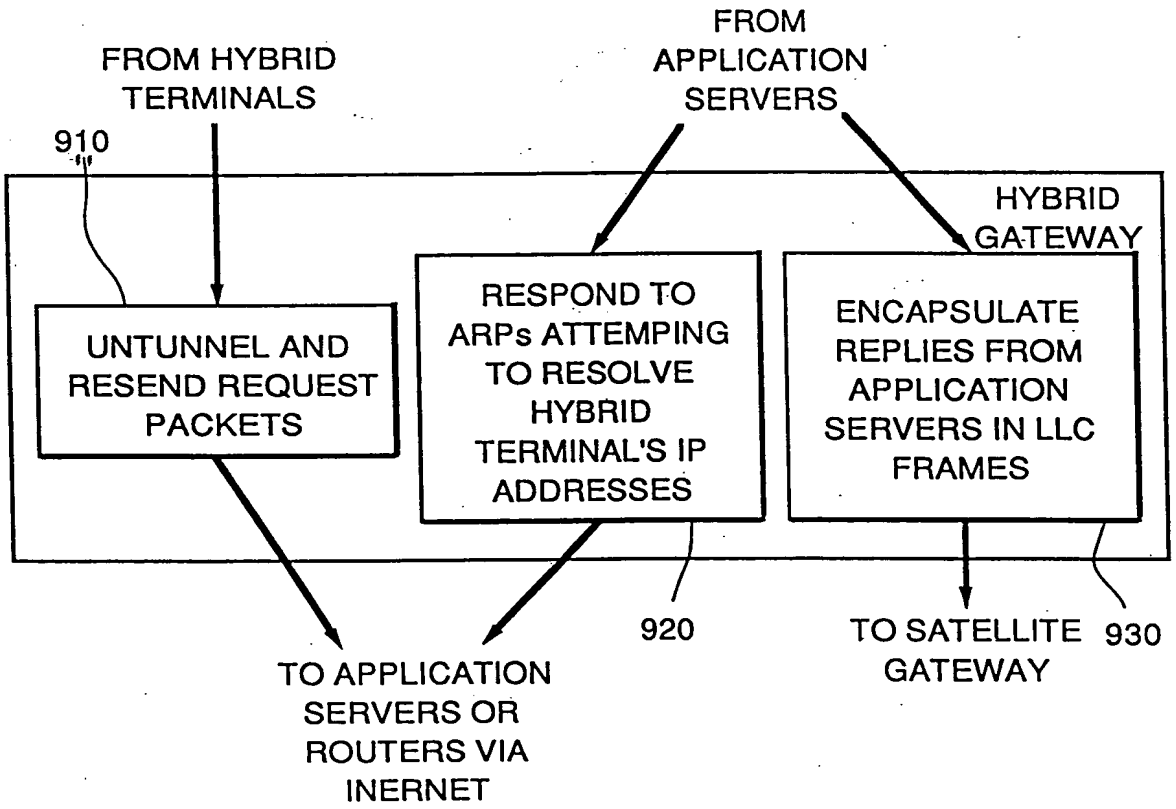

FROM HYBRID TERMINALS
FROM APPLICATION SERVERS
910
HYBRID GATEWAY
UNTUNNEL AND RESEND REQUEST PACKETS
RESPOND TO ARPs ATTEMPING TO RESOLVE HYBRID TERMINAL'S IP ADDRESSES
ENCAPSULATE REPLIES FROM APPLICATION SERVERS IN LLC FRAMES
920
930
TO APPLICATION SERVERS OR ROUTERS VIA INERNET
TO SATELLITE GATEWAY

FIG. 10.

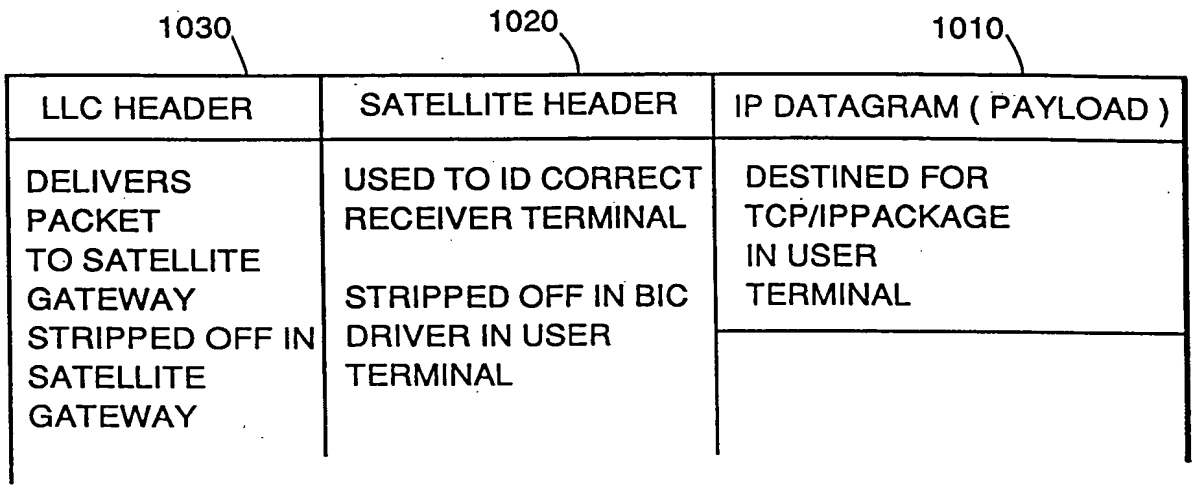
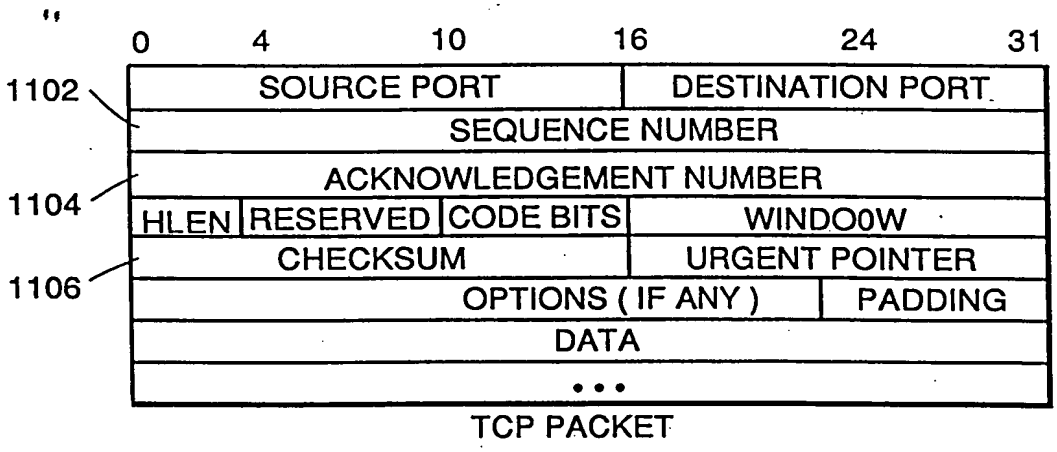


FIG. 11.



TCP PACKET

FIG. 12.

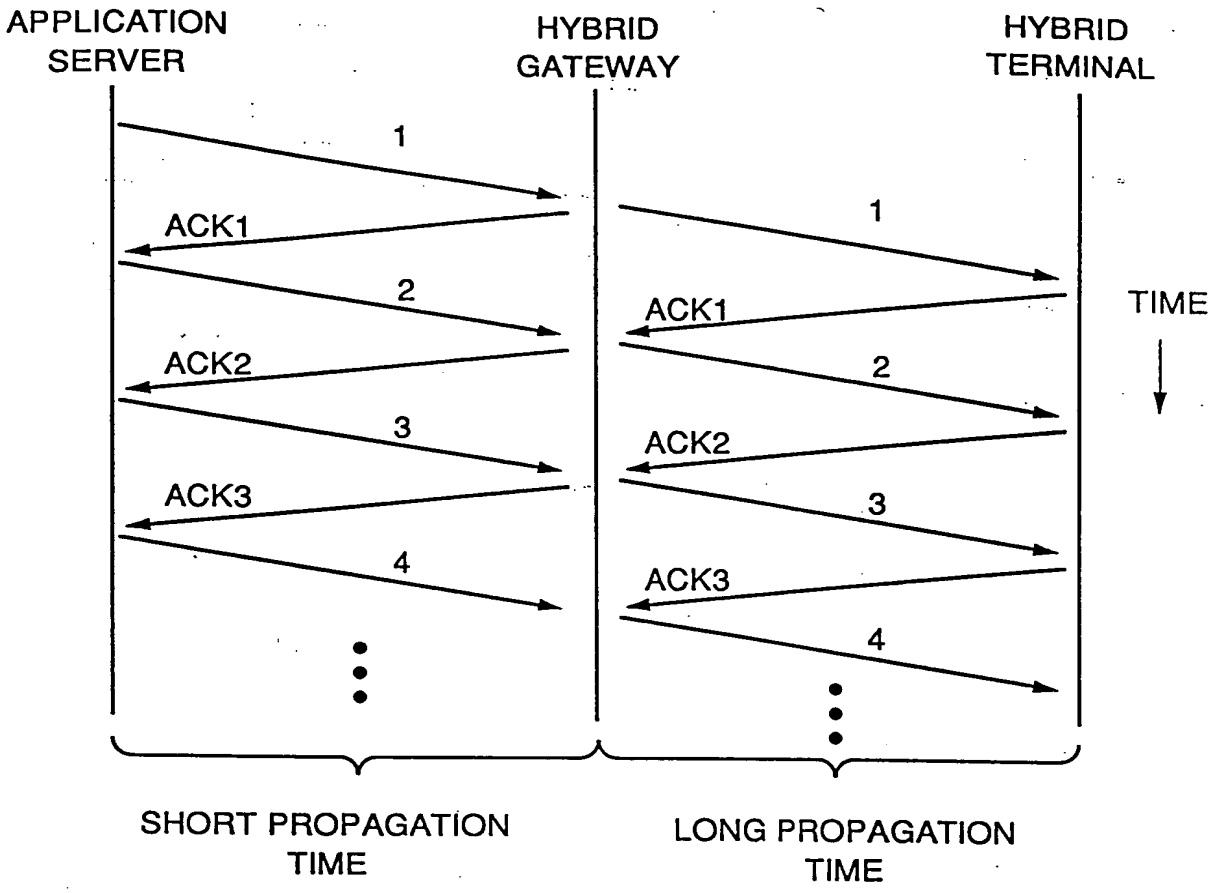


FIG. 13a.

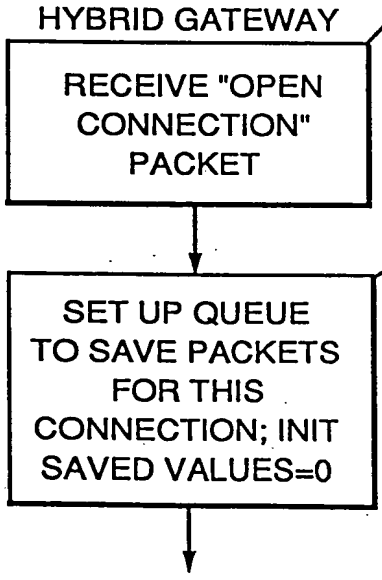


FIG. 13b.

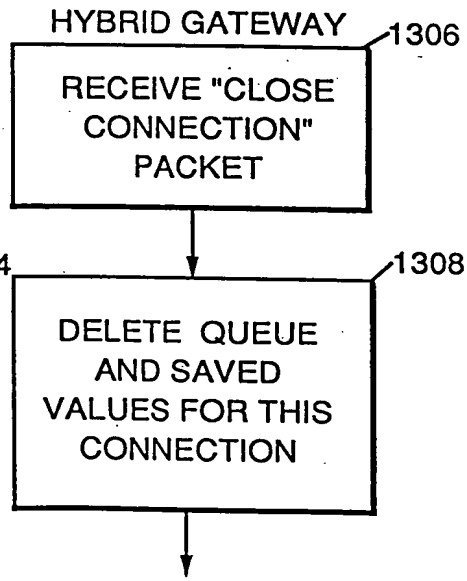


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FIG. 13c.

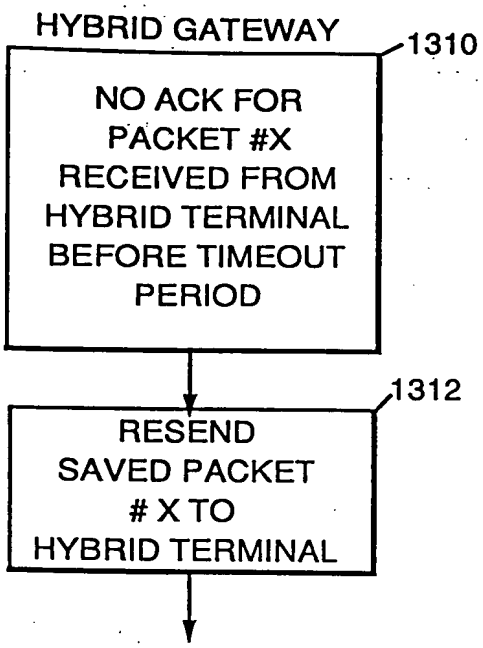


FIG. 13d.

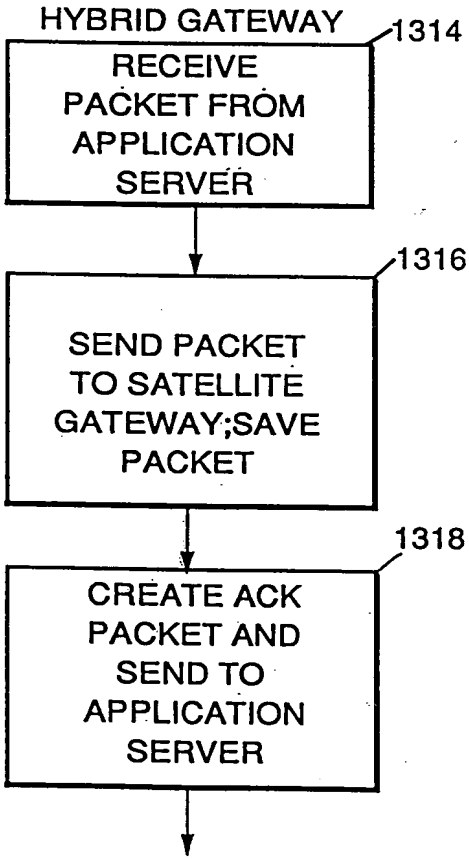
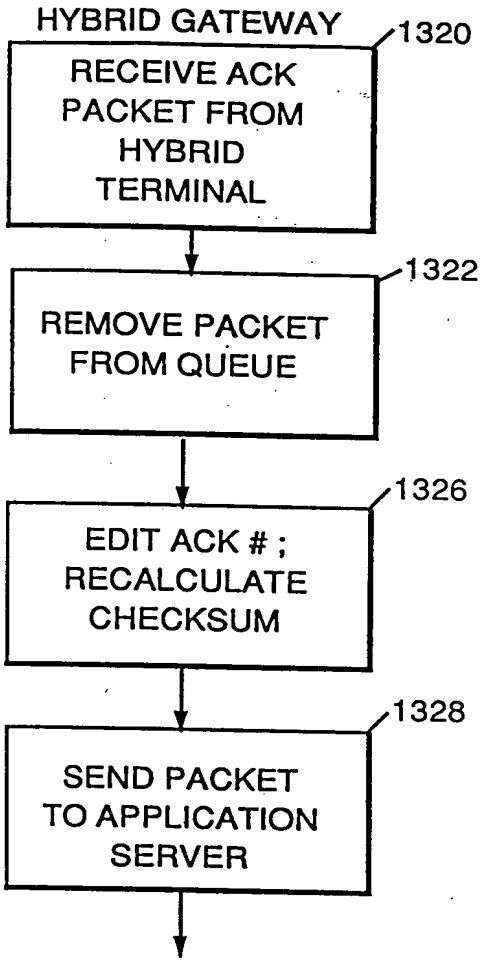


FIG. 13e.



05578-052600

0092h0" 8TT6S560

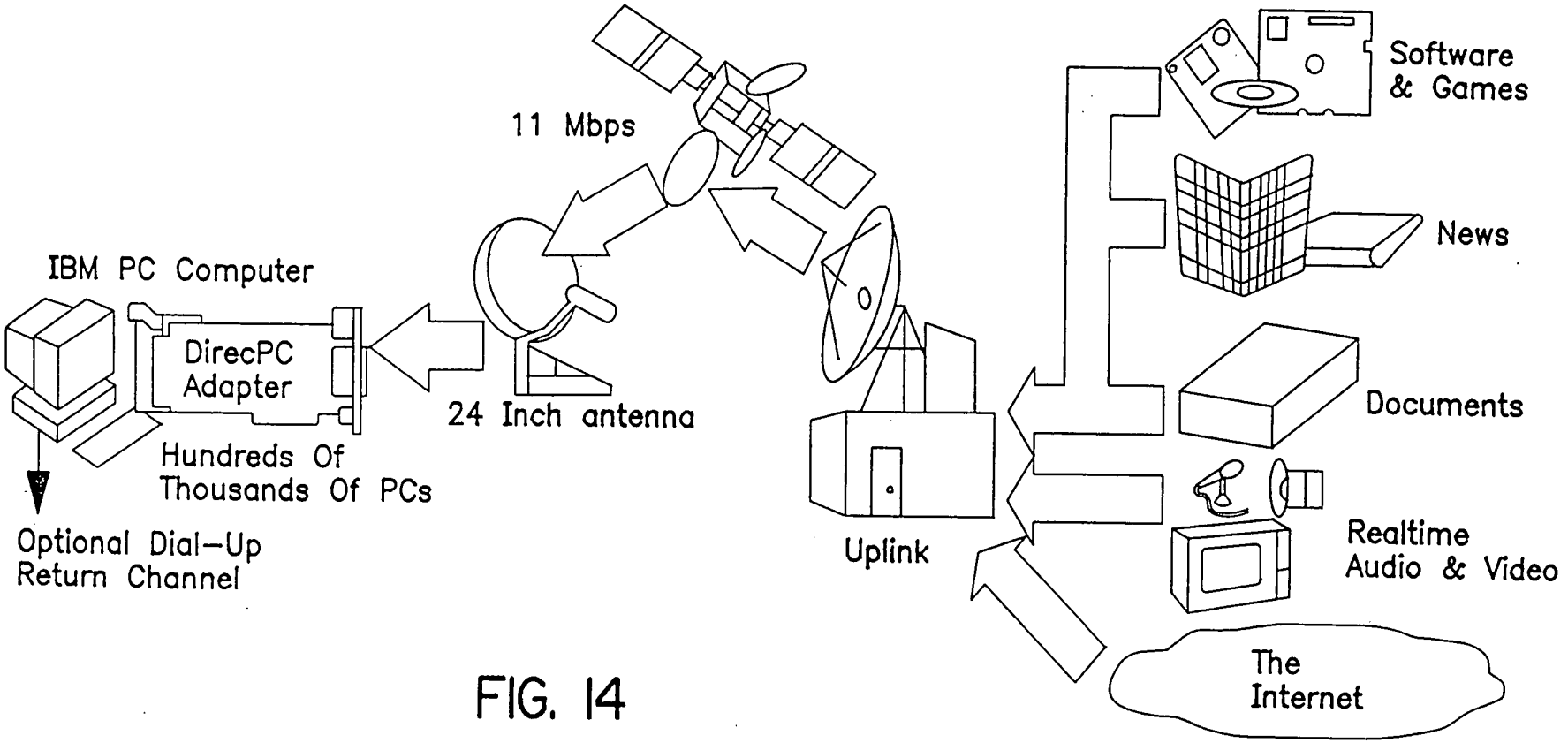


FIG. 14

09592h0 "8TT65560

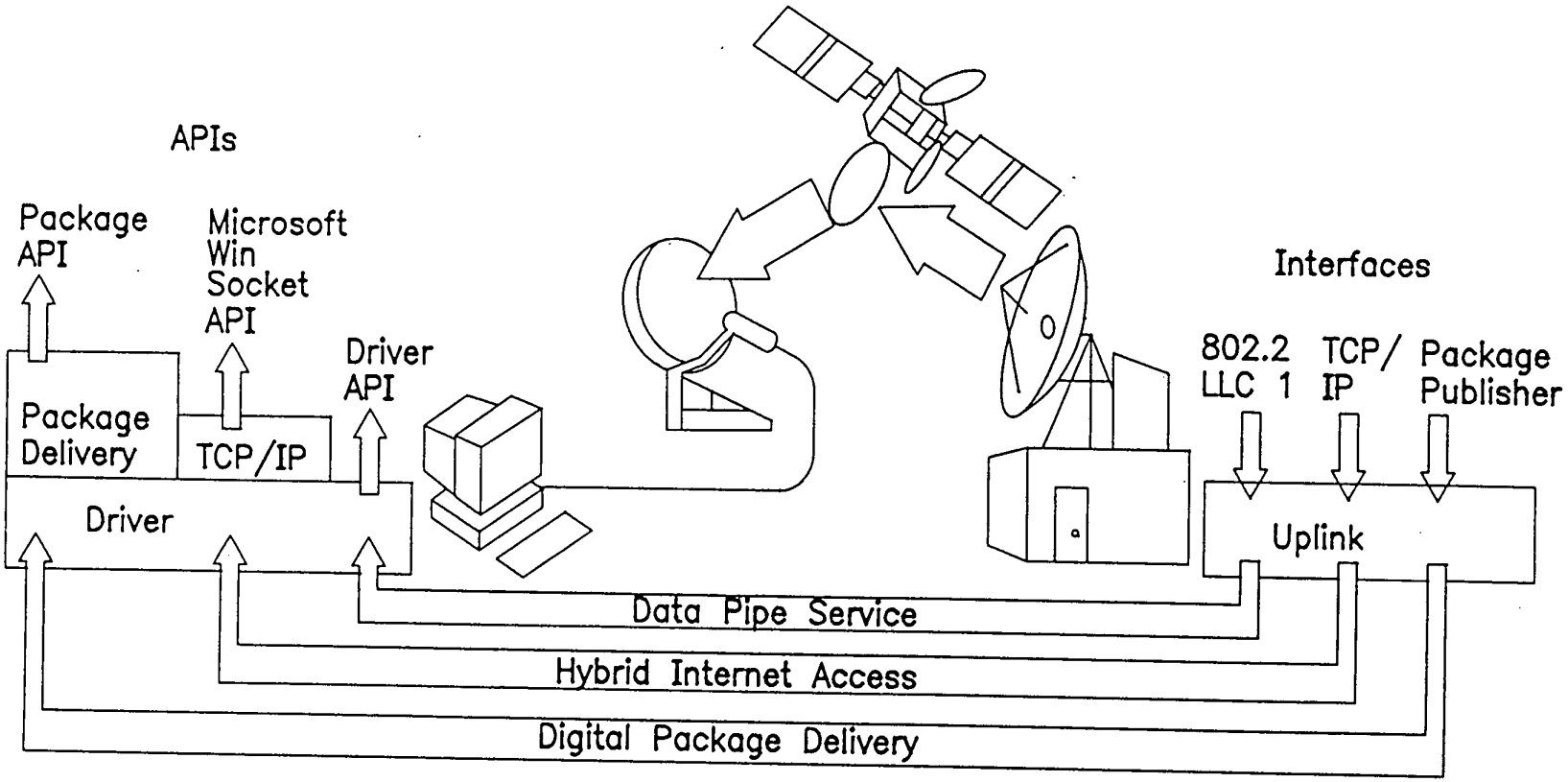


FIG. 15